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EXAMINER	
NGUYEN, HUNG THANH	
ART UNIT	PAPER NUMBER
2841	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/722,692	RAY ET AL.
	Examiner	Art Unit
	HUNG T. NGUYEN	2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3-8,12,27-32 and 36* is/are allowed.

6)☒ Claim(s) *1,2,9-11,13-21,25,26,33-35,37-45 and 47-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/24/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-2, 9-11, 13-21, 25, 26, 33-35, 37-45, 47-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Joist (US 6,916,190).

Regard claim 1, 25, 47: Joist discloses in figures 1a-1e an ejector comprising: an ejector handle (elements 6, 7, 8, 9, 10) capable of being rotationally coupled (see figure 1a-1e) with a blade (3), the ejector handle (elements 6, 7, 8, 9, 10) movable between a first position (see figure 1a, lock from rack 2) wherein the blade (3) is secured in a rack (2) and a second position (see figure 1e, remove from rack 2) wherein the ejector handle (elements 6, 7, 8, 9, 10) can be removed from the rack (2); a release mechanism (elements 10, 11, 17) coupled with the ejector handle (elements 6, 7, 8, 9, 10), the release mechanism (elements 10, 11, 17) to secure the ejector handle (elements 6, 7, 8, 9, 10) in the first position (see figure 1a, lock from rack 2) and, upon actuation, to allow movement of the ejector handle (elements 6, 7, 8, 9, 10) toward the second position (see figure 1e, remove from rack 2); and a lock mechanism (elements 10, 11, 12) disposed in the ejector handle (elements 6, 7, 8, 9, 10) and movable between a locked

position (see figure 1a) and an unlocked position (see figure 1a), wherein the lock mechanism (elements 10, 11, 12), when in the locked position (see figure 1a), engages the release mechanism (elements 10, 11, 17) to prevent actuation of the release mechanism (elements 10, 11, 17).

Regard claim 2, 26: Joist discloses in figure 6a the ejector further comprising a base (31) capable of being attached to the blade (explain in claim 1), wherein the ejector handle (explain in claim 1) is rotationally coupled (explain in claim 1) with the base (see column 8, line 1-5).

Regard claim 9, 33: Joist discloses in figures 1a-5b the ejector wherein the ejector handle comprises: a body (29) rotationally coupled (see figure 5a) with the base (31) about an axis of rotation (see figure 1a-5b), the body (29) including a first lever arm (elements 6, 7, 8) extending from the axis of rotation (see figure 1a-5b) and a second lever arm (elements 6, 8) extending from the axis of rotation (see figure 1a-5b); a cavity (hole on body 29) formed in the body (29), the cavity (hole in body 29) able to receive (see 1a-5b) the release mechanism (explain in claim 1) and an engagement element (18) disposed on the second lever arm (elements 6, 8) the engagement element (elements 8, 18) to interface with a mating retaining element (18) disposed on the rack (2) while the ejector handle (explain in claim 1) is moved between the first (explain in claim 1) and second positions (explain in claim 1).

Regard claim 10, 34: Joist discloses in figures 1a-1b the ejector wherein the ejector handle (explain in claim 1) is movable between the first (explain in claim

1) and second (explain in claim 1) positions by exerting a force (see figure 1a-1b) on the first lever arm (explain in claim 9).

Regard claim 11, 35: Joist discloses in figures 1a-1b the ejector wherein the first lever arm (explain in claim 9) has a length greater than a length (elements 6, 7, 8 is longer than elements 6, 8) of the second lever arm (explain in claim 9).

Regard claim 13, 37: Joist discloses in figure 1a-1b the ejector wherein the mating retaining element (18) forms part of a hook body (see figures 1a, 1b) that is attached to the rack (2).

Regard claim 14, 38: Joist discloses in figures 1a-1b the ejector wherein the engagement element (elements 8, 18) interacts with the mating retaining element (18) to secure (see figures 1a-1b) the blade (explain in claim 1) in the rack (2) when the ejector handle (explain in claim 1) is at the first position (explain in claim 1).

Regard claim 15, 39: Joist discloses in figure 1a-1b the ejector wherein the engagement element (explain in claim 9) interacts with the mating retaining element (explain in claim 9) to exert an extraction force (see figure 1a-1b) on the blade (explain in figure claim 1) when the ejector handle (explain in claim 1) is moved from the first position (explain in claim 1) to the second position (explain in claim 1).

Regard claim 16, 40: Joist discloses in figure 1a-1b ejector wherein the engagement element (explain in claim 9) interacts with the mating retaining element (explain in claim 9) to exert an insertion force (see figures 1a-1b) on the blade (explain in claim 1) when the ejector handle (explain in claim 1) is moved

from the second position (explain in claim 1) to the first position (explain in claim 1).

Regard claim 17, 41: Joist discloses in figures 1a-1b the ejector wherein the release mechanism (explain in claim 1) is further able to secure (see figure 1a-1b) the ejector handle (explain in claim 1) in the second position (explain in claim 1).

Regard claim 18, 42: Joist discloses in figures 1a-1b the ejector wherein the release mechanism comprises: a body (explain in claim 9) rotationally coupled (explain in claim 9) with the ejector handle (explain in claim 1) about an axis of rotation (explain in claim 9), the body (explain in claim 9) including a first lever arm (explain in claim 9) extending from the axis of rotation (explain in claim 9) and a second lever arm (explain in claim 9) extending from the axis of rotation (explain in claim 9), the body (explain in claim 9) movable between an initial position (see figure 1a-1b) and a depressed position (see figure 1a-1b); and a catch element (10) disposed on the second lever arm (explain in claim 1), the catch element (10) for engaging a corresponding notch (16) on the base (explain in claim 1) when the body (explain in claim 9) is at the initial position, the interaction between the catch element (12) and the notch (16) preventing movement of the ejector handle (explain in claim 1), wherein the release mechanism (explain in claim 1) is actuated by applying a force (see figure 1a-1b) to the first lever arm (explain in claim 1) to move the body (explain in claim 9) from the initial position (see figure 1a-1b) to the depressed position (see figure

1a-1b), the catch element (12) disengaging the notch (16) when the body (explain in claim 9)is at the depressed position (see figure 1a-1b).

Regard claim 19, 43: Joist discloses in figures 1a-1b the ejector wherein the catch element (explain in claim 18) engages a secondary notch (17) on the base when the body (explain in claim 9) is moved to the depressed position, the interaction between the catch element (10) and the secondary notch (17) holding the body (explain in claim 9) at the depressed position (see figure 1a-1b).

Regard claim 20, 44: Joist discloses in figures 1a-1b the ejector further comprising a hook (see figure 1a-1b for the hook disposed on element 18), the hook (see figure 1a-1b for the hook disposed on element 18) attachable to the rack (2), the hook (see figure 1a-1b for the hook disposed on element 18) including a retaining element (explain in claim in claim 9) for interacting with a mating engagement element (explain in claim 9) on the ejector handle (explain in claim 1) to secure the blade (explain in claim 1) in the rack (2) when the ejector handle (explain in claim 1) is at the first position (explain in claim 1).

Regard claim 21, 45: Joist discloses in figure 1a-1b the ejector wherein the engagement element (explain in claim 9) interacts with the mating retaining element (explain in claim 9) to exert an extraction force (see figure 1a-1b) on the blade (explain in claim 1) when the ejector handle (explain in claim 1) is moved from the first position (explain in claim 1) to the second position (explain in claim 1), and wherein the engagement element (explain in claim 9) interacts with the mating retaining element (explain in claim 9) to exert an insertion force (see figure 1a-1b) on the blade (explain in claim 1) when the ejector handle (explain in

claim 1) is moved from the second position (explain in claim 1) to the first position (explain in claim 1).

Regard claim 48: Joist discloses in figures 1a-2e the ejector further comprising means for biasing the releasing means toward a position in which the releasing means maintains the ejecting means in the first position (see figures 1a-2e for details).

Regard claim 49: Joist discloses in figures 1a-2e the ejector wherein the releasing means is further able to secure the ejecting means in the second position (see figures 1a-2e for details).

Regard claim 50: Joist discloses in figures 1a-2e the ejector further comprising means for providing a visual indication of a status of the locking means (see figures 1a-2e for details).

Regard claim 51: Joist discloses in figures 1a-2e the ejector further comprising means for providing tactile (see figures 1a-2e for details).

feedback to a user indicative of a position of the locking means.

Regard claim 52: Joist discloses in figures 1a-2e the ejector wherein the ejecting means including means for providing a mechanical advantage (see figures 1a-2e for details).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

> be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 22-24, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joist (US 6,916,190) in view of Tollbom (US 5,793,614).

Regard claim 22, 46: Joist discloses all the elements of the ejector as described above with respect to claim 1 except, Joist does not disclose the ejector further comprising a compression spring disposed between the release mechanism and the ejector handle, the compression spring to bias the release mechanism toward a position in which the release mechanism maintains the ejector handle in the first position.

Tollbom discloses a compression spring disposed between the release mechanism and the ejector handle, the compression spring to bias the release mechanism toward a position in which the release mechanism maintains the ejector handle in the first position.

Joist and Tollbom are analogous art because they are from the same field of endeavor to make ejectors.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to make spring of Joist to bias the release mechanism as taught by Tollbom.

Therefore, it would have been obvious for one ordinary skill in the art to combine Joist with Tollbom for the benefit of easier to release handle.

Regard claim 23: Joist discloses all the elements of the ejector as described above with respect to claim 1 except, Joist does not disclose the ejector wherein

the base, ejector handle, release mechanism, and lock mechanism are each forms from a molded plastic.

Joist does not disclose ejector wherein the base, ejector handle, release mechanism, and lock mechanism are each forms from a molded plastic.

However it is old and well known for one ordinary skill in the art to make ejector wherein the base, ejector handle, release mechanism, and lock mechanism by molded plastic.

Therefore, it would have been obvious for one ordinary skill in the art to make ejector wherein the base, ejector handle, release mechanism, and lock mechanism by molded plastic for the benefit of cost, insulation and easy to handle.

Regard claim 24: Joist discloses all the elements of the ejector as described above with respect to claim 1 except, Joist does not disclose the ejector wherein the base, ejector handle, release mechanism, and lock mechanism are assembled together using a snap-fit process.

However, it is old and well known for one ordinary skill in the art to make the ejector wherein the base, ejector handle, release mechanism, and lock mechanism are assembled together using a snap-fit process.

Therefore, it would have been obvious for one ordinary skill in the art to make the ejector wherein the base, ejector handle, release mechanism, and lock mechanism by a snap-fit process for the benefit of convenience to assembly.

Allowable Subject Matter

Claim 3-8, 12, 27-32, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regard claim 3, 27: Joist discloses in figures 3-9 The ejector of claim 1, wherein the lock mechanism comprises: a cylindrical body disposed within a cylindrical hole in the ejector handle (explain in claim 1), the cylindrical body rotable between the locked (explain in claim 1) and unlocked positions (explain in claim 1); and a slot disposed proximate an end of the cylindrical body and oriented parallel to an axis of the cylindrical body, the slot sized and oriented to receive a key disposed on the lock mechanism, wherein the slot can receive the key upon actuation of the release mechanism (explain in claim 1).

There would no motivation to make this modification as Joist teaches a cylindrical body disposed within a cylindrical hole in the ejector handle, the cylindrical body rotable between the locked and unlocked positions; and a slot disposed proximate an end of the cylindrical body and oriented parallel to an axis of the cylindrical body, the slot sized and oriented to receive a key disposed on the lock mechanism, wherein the slot can receive the key upon actuation of the release mechanism.

Regard claim 12, 36: Joist discloses in figures 1c-1d the ejector wherein the first lever arm (explain in claim 9) and the second lever arm (explain in claim 9) are separated by an angle of approximately ninety degrees.

There would no motivation to make this modification as Joist teaches the first lever arm and the second lever arm are separated by an angle of approximately ninety degrees.

Relevant Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takahashi (5,140501) teaches the Mechanism for inserting and withdrawing printed board, Petitpierre et al. (US 6,172,880) teaches Faceplate for an electronic circuit, Kurrer et al. (US 6,128,198) teaches Front system for a printed circuit board assembly having active passive switching, Joist (US 5,504,656) Device for removing a plug-in module, Vermette (US 6,148,506)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG T. NGUYEN whose telephone number is 571-272-5983. The examiner can normally be reached on 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMMIE CUNEO can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

HN

Hung Thanh Nguyen

September 23, 2005

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